Business Model Innovation for Sustainability and Social Impact

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Abstract
The purpose of this paper is to investigate whether the cooperative social model that also involves food and beverage products can be considered a sustainable model.The authors studied the Italian social cooperative Arcobaleno of Turin, implementing the sustainable business model in the food industry with a specific focus on the human resources factor in the group context and focusing on some more relevant aspects concerning the consolidated statement of the financial statements.The study highlights social output; the market dimension and non-market dimension of the consolidated group provide a major in-depth study of the SROI model approach. It is based on accounting measures of production, based on the resources used, measurements of performance using indicators, according to the principles of cost-efficiency analysis (CEA) and the monetary valuation of production approach based on the cost-benefit analysis (CBA).The model and the analysis of social impact can have implications throughout Europe where social cooperatives are already widespread.The effect of this model has an effective impact on the overall economic system.
The percentage of disadvantaged workers involved in the consolidated group allows for social allocation and better social reintegration.The analysis allows, also through practical evidence, to overcome the limits linked to the measurement of the innovative performance of social innovation in the food sector. The development and diffusion of social cooperatives with the elements highlighted in the analysis allow the development of sustainable models that consider the respect and the valorisation of human resources.
Keywords*: food industry, sustainability, business model innovation, social cooperative, social impact, consolidated group.*
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1. Introduction

Social cooperatives or social enterprises involved in the literature different characteristics related to the innovative function, leadership, opportunities, profitability, value creation and social benefits (Okpara & Halkias, 2011). Some authors define social enterprises as companies characterized by a production that creates social value during the production of goods and services with high added value for the public or the community, the whose added value is reinvested in the activity (Austin, Stevenson, & Wei-Skillern, 2012). Scholars and the academic world have affirmed that just as profit and social activities cannot fail to consider positive externalities (the creation of added value) (Spano, 2009), but literature has not yet defined a model of social cooperative but only some individual elements such as the ability to solve social problems and the role of investors (Borzaga & Defourny, 2004; Dart, 2004; Defourny & Nyssens, 2010) or elements linked to a reciprocal approach in service production (Corazza & Cisi, 2012; Güth, 1995; Holländer, 1990; Steinberg & Gray, 1993). If literature has defined some elements of social entrepreneurship aimed at models of sustainability (Dees, 2017; Seelos & Mair, 2005; Stokes, Moore, Brooks, Wells, & Jessica, 2013; Weerawardena & Mort, 2006), there is no definition and verification of the social cooperative model confirmed by empirical evidence that pursues and measures its effect. There are numerous examples of social entrepreneurship linked to food (Boccia & Sarno, 2019; Certo & Miller, 2008; Cummins, Hospido, & Van Impe, 2019; Kline, Shah, & Rubright, 2014; Santos, 2012; Seelos & Mair, 2005) but no model whose sustainability elements can be generalized finding the same approach or similar legislation in many countries. The business model in the social field considers both the socioeconomic environment, internal organizational capabilities (Stubbs & Cocklin, 2008). The qualitative model based on performance indicators KPI elements of the business model (Irene, Marika, Giovanni, & Mario, 2016; M. Weber, 2008) and non-financial information (Epstein & Freedman, 1994) guarantees a complete vision of the impact that must, however, be evaluated and tested by empirical evidence. The reduction of resources and the need to identify sustainable models requires the need to provide important information of a non-financial type, and such obligations require companies with certain draw-up characteristics to document containing non-financial information as introduced by the Law of 30 December 2016 n. 254 (the Italian Republic, 2016) published on January 10, 2017, which will implement the Directive 2014/95 / EU (EU, 2014). The relapse of the model is strictly linked to non-financial information that is applied in the model. The study highlights social output; the market dimension and non-market dimension of the consolidated group provide a major in-depth study of the SROI model approach (Krlev,

Münscher, & Mülbert, 2013). It is based on accounting measures of production, based on the resources used, measurements of performance through the use of indicators (Nicholls & Murdock, 2012), according to the principles of cost-efficiency analysis (CEA) and the monetary valuation of production approach based on the cost-benefit analysis (CBA). The CBA analysis provides in-depth evidence of the sustainable business model linked to social cooperatives.

Usually the term stakeholder was conceptualized as those groups without whose support the organization would disappear (Freeman and Reed, 1983; Freeman et al., 2018). According to the Stakeholder theory, the realization of any commercial activity must be aimed at favouring the relationships and interests of the different parties involved. Interest groups are classified as the environment - customers, shareholders and companies - and categorized according to the process - workers and suppliers (Atkinson, Waterhouse, & Wells, 1997). There are also two main groupings, strategic and moral, being the standard of the proposed classification of a strategic nature (Frooman, 1999). Even if strategic the social impact must consider all the variables and aspects related to the stakeholders and this is possible only through reports and outputs that consider all the subjects involved (Civera, De Colle, & Casalegno, 2019). The former corresponds to groups that influence the functioning of the organization and must be considered by the latter in the context of its management, while company actions influence the latter. An outstanding school of thought classifies them as economic, organizational and social (Werther Jr & Chandler, 2010). In social cooperatives, as a rule, the role of the network is important and is part of the elements that distinguish and interact with the model, creating added value on the reference context (Bresciani, 2017; Strand & Freeman, 2015).

The model and the analysis of social impact can have implications throughout Europe where social cooperatives are already widespread. From the latest data (2015) social cooperatives in Europe are 176.461 with 141,502,512 members, this means that more than 17% of European citizens are members of a coop. Only in Italy in 2017, there are 11,205 social cooperatives with a total turnover of 8,008,506 € and 4.387,00 employees, of whom 248 social cooperatives specialized in the beverage and food sector with 2,943 workers (Directorate-General for Employment, Social Affairs and Inclusion, 2015).

The study intends to refute whether the cooperative social model that also involves food and beverage products can be considered a sustainable model.

2. Theory development of model and social model

Impact of the business model due to empirical evidence of the model

The relapse of the model is analyzed through the approach proposed by Murdock and the SROI guidelines. They are considered accounting measures of production, based on the resources used; according to measurements of performance using indicators, the principles of the cost-efficiency analysis (CEA); and the monetary valuation of production approach based on cost-benefit analysis (CBA). Social enterprises are often characterized as producing 'merit goods'; that is, goods whose production generates impacts beyond what is captured through the market. A broad examination of what social enterprises produces is, therefore, useful here; one which goes beyond the output measurement alone. The analyzes explored and the outputs achieved concern both market dimensions (direct impact or indirect beneficiaries) and dimensions that are not market (indirect impact or externalities and indirect benefits). The study empirically highlights both the relapse in direct and indirect terms by testing the effectiveness of the model and giving evidence to those that are reproducible characteristics. Performance measurement starting from the KPIs usually includes produces merit good – includes a non- market dimension, in order to try to capture this dimension quantitatively, it is necessary to turn to techniques used to measure the production of goods that are not traded on the market Table 1.

Table 1. Tools for measuring social impact

Approach	Accounting measures Economic measures Optimization Resources Used			
Theoretical reference	National Accounts	CEA	CBA	
Tools	Accounting value - Cost-based approach - Revenue-based approach	Indicators + Qualitative analysis	Indirect monetary value	Economic value (WTP) - Revealed Preferences - Expressed preferences

CEA: Cost efficiency analysis CBA: Cost-benefit analysis *WTP: willingness to pay *CVM: contingent valuation method

** Techniques of indirect monetary valuation: effect on production; human capital; human life value; avoided expenditure; replacement cost; opportunity cost; time salving ecc.

The economic measure of non-market production compares means, objectives, costs and advantages. Public goods are not market-based so you need to look for an alternative and an approach to the market price. This, however, refers to the hybrid group as a whole (Fuguitt & Wilcox, 1999; Smith, 2018). Leaving aside the evaluation of the CEA, which in our case remains unchanged despite the variation of the composition of the variables in the model, the analysis focuses on the CBA and the relapse that this may have. The CBA considers the 'value' to performance - considered (output and impacts) - of productive activity and to measure its contribution to the welfare of the community. In this sense, monetary evaluation techniques are part of Welfare Economics. If in public bodies and cooperatives that operated on goods that the market would not produce, the value generated by the Actual Net Value is sustainable when higher than zero, this highlight has not yet been given in the production of goods on the market (Arrow et al., 1997). The analysis therefore gives evidence of how the case study, present not only on services of public utility but also services on the market is able to produce positive net value. But to consider the case with only the net actual value is limiting, therefore in the analysis greater attention is placed on the human capital involved, a true distinctive element concerning profit companies and other business models (Borzaga, Depedri, & Tortia, s.d.). Our analysis, therefore, focuses on the distinctive elements of the model compared to the one that can be observed in the profits, contributing to the SROI approach (Krlev et al., 2013) and confirming the added value on the sustainability of the observable factors.

2.1 Creation and enhancement of environmental sustainability generated by the system.

A sustainable process derives from a triple bottom line analysis of the activity, in particular the outcomes are strictly related to a series of actions that produce results that affect people, profits and the planet (Ma, 2018).
Interest in triple bottom line accounting has been growing across for-profit, non-profit and government sectors. Many businesses and non-profit organizations have adopted the TBL sustainability framework to evaluate their performance, and a similar approach has gained currency with governments at the federal, state and local levels (Slaper & Hall, 2011).
Triple Bottom Line (TBL) concept focuses on the three main pillars of sustainability such as environment, economy, and society (Elkington, 1998).
Among the TBL sustainability indicators, employment, income, tax, and work-related injuries were considered as social indicators, while gross domestic product, gross operating surplus, and imports were categorized as key economic indicators (Elkington & Rowlands, 1999; Hendricks, Plantz, & Pritchard, 2008; Infante, de Mendonça, Purcidonio, & Valle, 2013; Norman & MacDonald, 2004; Wiedmann & Lenzen, 2008; Wood & Garnett, 2010).
To achieve outstanding triple bottom line performance, new types of economic, social, and environmental partnerships are needed. The inescapable conclusion is that as the environmental agenda broadens to incorporate sustainability's triple bottom line, some NGOs are recognizing the key role that business can, indeed must, play in forging workable solutions. Increasingly, stakeholder capitalism will be the name of the game. Growing numbers of businesses are seeking to move beyond confrontation to forge more productive relationships with NGOs (Elkington, 1998; Foran, Lenzen, & Dey, 2005).
But one thing can be guaranteed: no company, industrial sector, or national economy will succeed in defining and meeting its triple bottom line responsibilities and targets without developing much more extensive stakeholder relationships and partnerships than would have been the case even in the recent past (Elkington, 1998).
Social aspects of sustainability involve a variety of stakeholders at different levels (Docherty, Kira, & Shani, 2008; J. Weber & Marley, 2012, 2012). The identification of the stakeholders, the analysis of the impact and the coverage of their delivered involves the committed stakeholders (investors, employers, pensioners), the involved stakeholders (suppliers, customers, government) and the interested stakeholders (society at large, media, special interest groups) (Ma, 2018).

3. Method

In line with the purpose of this article, the case study methodology was adopted by preparing a longitudinal and explanatory case study (Yin, 1981, 2017). In order to conduct an in-deth case study, the Italian social cooperative Arcobaleno of Turin was selected for the implementation of sustainable business model in food industry (Franceschelli, Santoro, & Candelo, 2018) with a specific focus on the human resources factor (Altopiedi & DI MONACO, 2010; Murphy, 2007; Porquier, Luciano, & DI MONACO, 2010) in the group context and focusing on some more relevant aspects concerning the consolidated statement of the financial statements financial. The case study points out some relevant aspects and possible approaches of elements in the model. The methods for collecting information use qualitative techniques and provide for interviews with managers and employees, analysis of internal documentation, observation of the reality and veracity of the data declared with a re-elaboration of some data that guarantee the validity and the reliability of the information. The primary data were collected directly from one of the

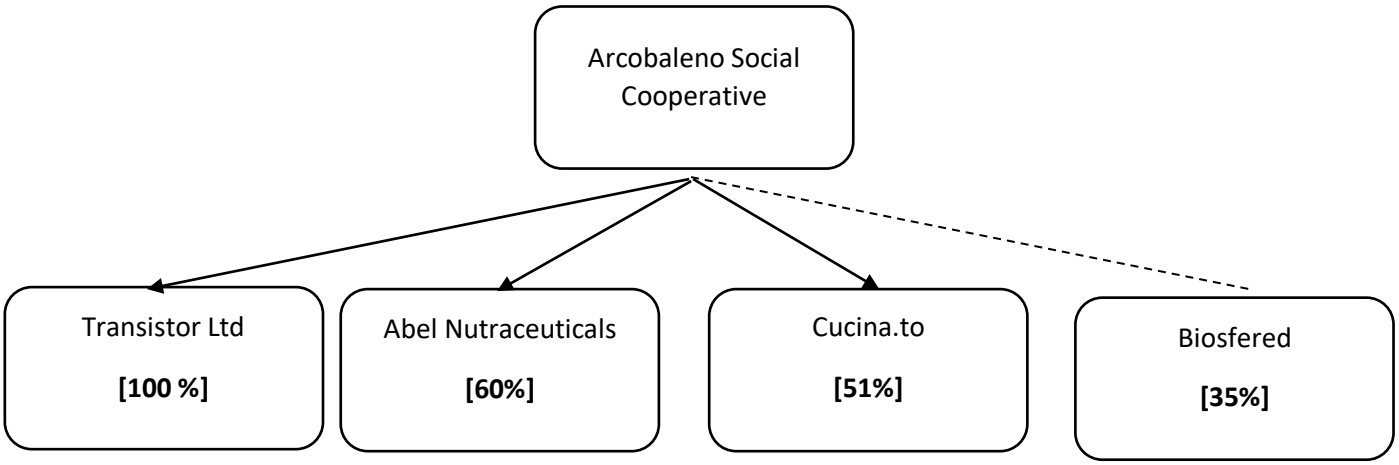
authors who has been carrying out research activities for years within the cooperative, the CEO of the cooperative has provided the secondary data. The validity is guaranteed by the triangulation of different resources with evidence of the key information collected. Double control of information guarantees the collected evidence through differentiated sources. The research makes it possible to record a phenomenon in a real-life setting, where boundaries between the context and the phenomenon tend to be blurred (Stake, 1995). The comparative analysis carried out highlights the characteristics of the various social accountability tools, with attention to non-financial information. The comparison allows internal validity on some characteristics according to what already defined by (Silverman, 2013). The data are not reprocessed in order to provide their own theories but focus on mere observation, description and collection. The literature allows us to confirm and combine the information collected (Yin, 2017). The transparency, the approach and the replicability of the analysis and the method allow reliability (Leonard-Barton, 1990). The rationale for the choice of the case study is explained about the context and to the proposed KPI approach in order to appreciate the choice also guaranteeing an external validity (Campbell, 1986,p.83). The study focuses on the elements required in the preparation of the contents of the consolidated statement of non-financial financial statements, starting from a group governance approach based on the canvas model, business model disclosure up to the creation and impact of the value. The research considers some intangible elements that characterize mixed-type companies. Codes of good practices might be a suitable tool to strengthen governance structures and practices. At a more practical level and focusing specifically on the accounting and auditing fields, results might have some interesting implications, as investors, market participants and, in general, any potential user of financial reports can take the level of compliance with recommendations as a feasible and reliable indicator of the quality of the accounting information released by the company (Garcia-Blandon, Argilés-Bosch, Martinez-Blasco, & Merino, 2018). The fallout and the information collection approach follows the POP method used to create Popular Financial Reporting (a social report containing both financial and non-financial information starting from the consolidated financial statements with a language suitable for stakeholders) (Biancone, Secinaro, & Brescia, 2016; Biancone, Secinaro, Brescia, & Iannaci, 2018; Brescia, 2019).

4Sustainable business model

4.1 Case study presentation

The Arcobaleno Social Cooperative was founded in 1992 by a receptionist of the Gruppo Abele association with the specific aim of creating new activities in Turin (Italy) aimed at offering job opportunities to people coming from the area of social hardship. The cooperative has therefore aimed at activating services with the following characteristics: high use of labor in relation to the level of investments; wide space for non-specialized in order to keep the entry threshold low; organization and quality of work based on productive rhythms in line with market demands, aiming, in particular, to acquire the concept of assumption of responsibilities and giving people the opportunity to evaluate their attitudes and professional skills; respect for its own code of ethics that excludes the possibility of participating in tenders on existing jobs, even more so if already done by other social cooperatives. The cooperative is a hybrid organization aimed at carrying out various activities. Arcobaleno Social Cooperative creates income and work for members falling among the types of people defined as "weak" in the social context, then the response to the need of public and private companies and citizens by providing specialized services related to the production of beverage and food, collection of paper and the disposal of specific types of waste. The Cooperative has therefore focused on activities with features focused on simplifying the work to favour the skilled labour force; empowering workers to keep up with the market; monitoring of results; solid assumptions to guarantee people's economic independence; always put the employment and social repercussions on the intervention territory at the centre of their choices. The services offered by Arcobaleno are: "Cartesio", door-to-door collection of cellulose fractions; " bulky waste ", collection of bulky waste; "Soeko": paper, plastic and glass collection, asbestos removal. The consolidated Group is made up of Arcobaleno Social Cooperative parent company, Transistor Company, 100% controlled, which deals with collection and disposal of RAEE, Abel Nutraceuticals Company, 60% controlled, which deals with microalgae cultivation, Cucina.to, a 51% subsidiary, which deals with the production of ready-made soups and risottos and Biosfered Company connected to the 35%, academic spin-off of the University of Turin - Department of Life Sciences, which markets extracts containing highly concentrated bioactive molecules (Graph 1).

Graph 1. Representation of consolidated group Arcobaleno Social Cooperative



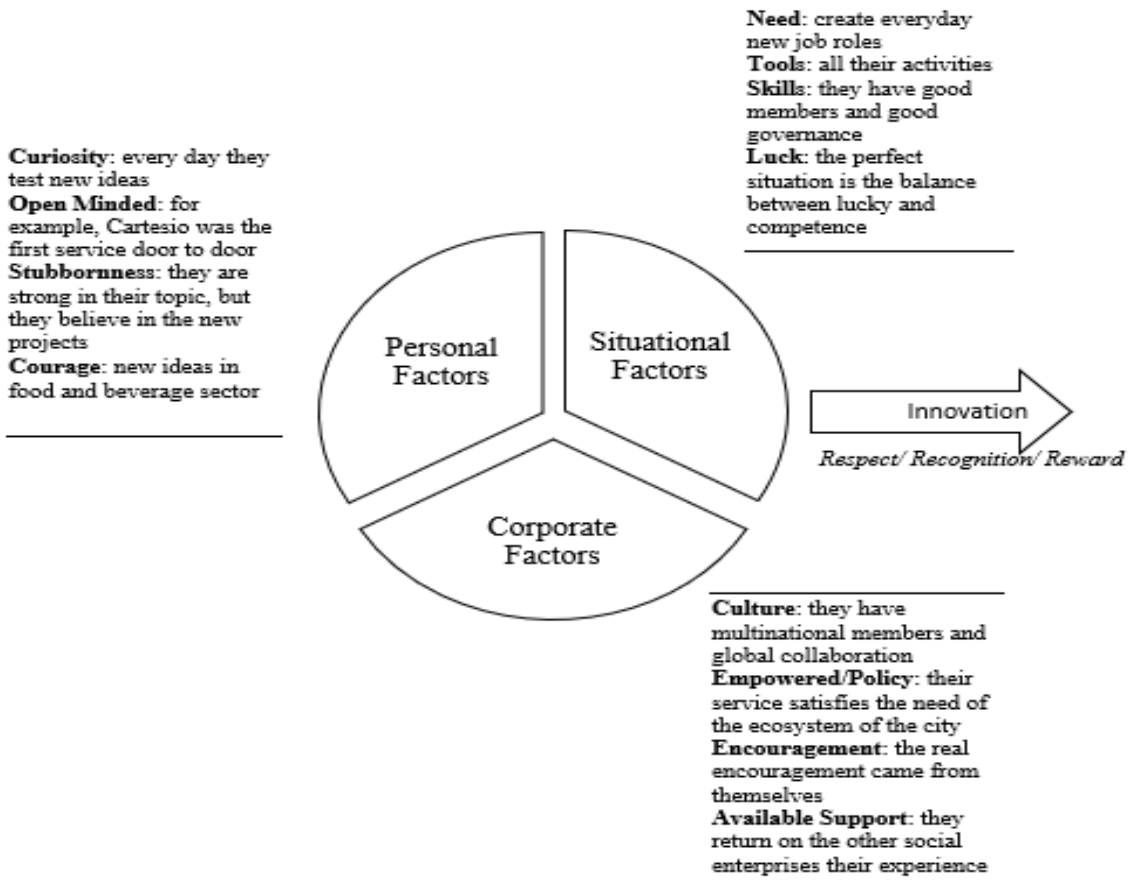
Cucina.to was founded in 2011 by former students of the University of Gastronomic Sciences of Pollenzo (Italy).
The company's mission is to cook good food - with high organoleptic and traditional qualities - to offer people the chance to eat well and save time.
Therefore, Cucina.to offers products with high service content for daily shopping: ready-to-eat dishes, fresh, without preservatives, obtained from seasonal raw materials processed in their laboratory.
This aspect is particularly relevant for two reasons. First, the founder had the chance to develop a business model from scratch (Franceschelli et al., 2018). In fact, the founder (who is also the CEO) is a chef who had experiences. Second, the business model innovation was carried out during a time of crisis (Kim & Mauborgne, 2014). In 2018 Cucina.to began part of the group of Arcobaleno Social Cooperative. They pursuit always the mission of the best products with material Km0 and the fast time to prepare but together with a new sustainability model they also had the social impact mission. In line with this, analyzing the business model of Cucina.to, sustainable and innovative aspects of each of the business model elements were found (Osterwalder, Pigneur, & Tucci, 2005). Therefore, the discussion of the case study stresses the innovative and/or sustainable aspects of each of the nine elements of the business model. Business model innovation indeed entails an improvement of one or more elements of the business model (Osterwalder & Pigneur, 2010).
Furthermore, Arcobaleno is part of the Abele Lavoro Social Consortium together with 3 others Social Cooperatives, for a total of almost 600 workers and a turnover of more than 24 million euros. Arcobaleno provides quality services in the sectors of recycling and waste treatment; food and beverage production, design, training and software development, archiving optics and document management, research and development (alternative energy, recovery materials, nutraceutical and pharmaceutical). Additionally, the network in particular is part of the Abele Group network, No Profit founded by Don Ciotti in Turin and since 1965 has dealing with rights and justice, proximity to this in difficulty and commitment to removing all that creates marginalization, inequality, loss. Among the activities, but not least, also the membership of Libera, no profit founded by Don Ciotti that deals with the fight against organized mafias with the protection of vulnerable people, reintegration of young people from areas affected by the phenomenon and recovery and use of real estate confiscated from the mafia. The attention to the model and the networks of which it is part make it a case study of excellence to evaluate aspects of sustainability, social innovation and social impact. The CEO's statement clearly represents the corporate vision: "Creating income and work for those discarded by society", transforming a segment of the population with few tools and even fewer opportunities. The model contributes to the theories provided by Murdock (Nicholls & Murdock, 2012), Franceschelli et al. (2018) and based on the sustainable business model and assessment of the actual impact (Salzberg, Gough, & Suen, 2019).

5. Findings

When dealing with the case study of a consolidated hybrid group, we cannot focus only on some specific activities, but we must focus overall. If the rainbow cooperative has introduced Cucina.to among the investee companies, it is to increase the activities already carried out and to employ the staff in an activity that also some disadvantaged resources could face. However, Cucina.To is part of a wider system that configures a reproducible model. The activities carried out and the mission immediately represents the first representative elements of the model. The main activities are the creation of job opportunities for all people trying to clear the social gap. Through the company activity, their

economic and social activities are returned to the territory. Working members represent an important asset for achieving the objectives. The corporate welfare is a concept that is already part of the DNA of the Rainbow group to be able to maintain the workplace a place where the members can be realized, both on a personal and professional level. The realization is possible through training courses, welfare initiatives and incentive tools. Starting from the triple bottom approach, it is possible to identify typical results and sustainable outcomes for each type of stakeholder (Ma, 2018). People play the main role within the social cooperative and refer to both the values of the Arcobaleno Cooperative and the value team. The social-oriented initiatives amount to 362. There is a high turnover in the initiatives proposed by the cooperative. The first sustainable output is represented by the Group's reputation and reliability which is aligned with the values they want to convey. The focus on human resources identifies 3,800 hours of training, minus 0.60% of hours of extraordinary absence, minus 19.10% attendance at meetings, a 13% decrease in accidents and a quantifiable fallout of over 1 million Euros Public Administration. This produces an increase in the skills and motivation of people. If we consider the relationship with customers and the public administration that in many cases makes social cooperatives hybrid organizations, we can focus on the products managed and on the value of the cost of personnel, a characteristic that will be discussed again. In fact, the cover managed the collection of 33.546 Tons by the Cartesio service, 77.058 interventions carried out by the bulky service, and verification during the process. The outcome product can be exploited both in economic terms and in an increase in interventions in the area of activity with continuous improvement of processes. The consolidated group produces economic value generated around 15 million euros per year. Staff costs represent about 50% of total costs. This element is predominant both in the legislation and in the proposed model. This element produces the distribution of economic value to the working members of the Group as output. The planet is one of the stakeholders to be considered through the vision of reuse and the skills produced in people. In the cooperative about 22% of energy was produced compared to the needs and about 25,368 are the CO2 emissions saved compared to the emission. The output generated is a decrease in negative environmental impacts. The skills of workers and people involved in the cooperative also increase with 246 people make up the staff. The report shows the increase in design activities with collaborations in schools and the increase of film productions on social and environmental issues. This obviously has the Enhancement of people as its output but also the exponential increase in the perception of common values through the network to which the cooperative adheres. These factors are explanatory of the main aspects of the sustainability model which include corporate factors, situational factors and personal factors for generating innovation Figure1.

Figure 1 Model factors that affect innovation in Cooperative Arcobaleno.



As already highlighted, human resources represent one of the most significant elements of the model in terms of sustainability. This hypothesis is also confirmed by the effective valuation of the value produced through the SROI analysis (Krlev et al., 2013) taking into consideration the CBA approach (Nicholls & Murdock, 2012) and distinctive elements of the context. Considering the benefits generated by the personnel, it is possible to evaluate them through the VAT generated equal to 390 thousand of euro, the taxes on product income paid by the shareholders equal to 235 thousand of euros, the reduction in the amount of the contribution given to workers who have lost their jobs but who have worked at least 13 months of contributions in the previous 4 years; at least 30 days of actual work in the 12 months preceding the beginning of unemployment. This contribution ceased for the employees according to the calculations in the case study amounts to 1,477 thousand euros, the possibility to repay the debt contracted by disadvantaged workers with consequent foreclosures for a value of 52 thousand of euros, and finally the insurance contributions for accidents at the paid workplaces which amount to 69 thousand of euros. In the case study, it is immediately evident that the economic benefits produced do not only individual concern subjects but the entire community and the work system through the payment of taxes and contributions that affect the entire community and the country's economic system. The benefits obtained by the personnel involved are then necessary to eliminate costs and loss of revenue. These consist of a reduction of the tax on productive activity foreseen for this type of cooperatives equal to 46 thousand of euros, to the reduction of compulsory insurance contributions in the workplace related to reductions envisaged for the disadvantaged personnel equal to 130 thousand of euros and for the same company that pays less insurance premiums for the disadvantaged workers employed for a total of 643 thousand euros. The result is equal to a positive value and repercussion of 1,404 thousand euros which provides a benefit to the system and the personnel, confirming the sustainability of the model.

6. Implications and conclusion

The proposed models concerning the hybrid social cooperative and food production are lacking. The elements collected in the findings allow to academics and scholars to define and confirm a series of elements that are highlighted. The elements described in the proposed sustainable model (Boccia & Sarno, 2019; Franceschelli et al., 2018) can be redefined on the elements highlighted in the social cooperative table 2.

Table 2. Elements of a hybrid social cooperative sustainable business model

Elements	Description
Client	Customers often recognize a social role through the cooperative's communication activities, the public body provides a possible activity suited to the type of staff involved. Customers recognize the enhancement of km0 products and commitment.
Relationship	The role of the network and the sounding board produced to increase the sustainable output both in terms of results and of values shared with the territory
Distribution and territory	The activity is closely linked to the territory through the workers employed, the type of service and shared values and the consolidated group allows a diffusion on more sectors that have a greater impact on the context.
Revenues	The employment of disadvantaged personnel, a prerogative of social cooperatives, represents a greater absorption of resources that do not affect the positive effects on the system and the revenues
Value proposition	A positive impact on the system in terms of sustainability with particular attention to the human resources involved
Key activities	The consolidated group vision allows a relapse in multiple sectors including food. Production with the use of materials at km0 and the management of services of public interest guarantees a series of sustainable activities
Key resources	The attention to sustainable principles and activities related to reuse guarantee a reduction in CO2 emissions and also the possibility of autonomously covering part of the energy used in the production system
Partner network	Membership of Abele Lavoro Social Consortium and Libera network allows the sharing of principles, methodologies for mapping the social impact during the system and the sharing of innovative personnel qualification tools
Costs	The main costs are of the personnel, but the cooperative carries out a double activity, productive and of the creation of social value through the employment of disadvantaged workers. The social value produced is greater than the costs

The food and beverage sector is a field of work in which some low-complexity standardized production processes (Manning & Mei Soon, 2013) can be adopted by disadvantaged workers, providing a considerable area of development. As demonstrated, social cooperatives have a positive impact on the system and, given the European diffusion, can be a model of impetus to be safeguarded and adopted more. Through this contribution, it is possible to affirm, with specific attention to social cooperatives, that this sustainable model can be considered innovative and applicable to a large extent in many countries precisely because of the similarity of characteristics linked to social cooperatives already present. The model can provide real change and improvement within the food sector, but we must also consider that the proposed model is of a consolidated and hybrid type. The main element linked to the involvement of disadvantaged personnel is very often linked to a multiplicity of activities that often involve the realization of activities of public interest. The proposed model analyzed all the variables individually, responding to the absence of a generalizable model. The case study was analyzed considering the elements proposed in the literature and refuting the theoretical assumptions (Boccia & Sarno, 2019; Franceschelli et al., 2018; Murphy, 2007; Osterwalder et al., 2005; Salzberg et al., 2019) related to the model and the approach. All the elements found in the model have also been confirmed by empirical evidence through the outputs of the POP report (Biancone et al., 2016, 2018; Valerio Brescia, 2019) and the social impact measurement approaches(Arrow et al., 1997; Ma, 2018; Nicholls & Murdock, 2012)

For this reason, future research activities can focus on case studies that exclusively carry out food and beverage production and management activities to refute the proposed model. The proposed approach increases what has already been provided in the literature and can give further elements of reflection for similar future analyzes.

Declarations of interest: none

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